

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 19, 2008 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with Applicants' assertion on Page 3, 4th Paragraph "Therefore, Trossen also fails to teach or suggest determining the transmission method in accordance ...". Trossen teaches wherein the transmission method, which is the modulation-coding scheme, is in accordance with the reception ability value, which is the data rate that can be supported by the mobile terminal (See Col. 5 lines 20 - 43). Trossen further teaches wherein said modulation-coding scheme is in accordance with the data rate that can be supported so that a mobile station with the lowest data rate support capacity can receive information using the designated modulation-coding scheme (See Cols. 5 lines 20 - 43, 6 lines 4 - 24, 7 lines 60 - 67, 8 lines 1 - 13). Trossen teaches a system in which each of the mobiles reliably receives data. The mobiles can have different data rates that said mobiles can support thus there can be a scenario in which there will be a mobile which can support the lowest data rate (See Col. 7 lines 60 - 62).

Examiner respectfully disagrees with Applicants' assertion on Page 4, 3rd Paragraph "As with Trossen, however, Petrus fails to teach or suggest using a collected reception value defining at least one of a ...". Petrus teaches a terminal that indicates the type of modulation being used (See Sections 0015 lines 6 - 9, 0032, 0033 lines 1 -

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4, Table 1), which is also an indication of the type of demodulation being used (Sections 0047 lines 15 – 17, 0049 lines 6 – 7). A transceiver that uses, for example, QPSK modulation typically uses a corresponding QPSK demodulation thus the indication of the modulation type is also a further indication of the corresponding demodulation type. Petrus thus reads on the limitation in question.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 6 – 7, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trossen et al. (US 7,054,643) in view of Petrus et al. (US 2004/0063406)

Regarding Claim 1, Trossen teaches a radio communication system for performing multicast communication comprising: a reception ability value collector configured to collect a reception ability value of each mobile station belonging to a specific multicast group (Cols: 3 lines 35 – 39, 4 lines 6 – 11, 5 lines 20 – 43, 6 lines 4 – 24, Table 1); a transmission method determiner configured to determine a transmission method of transmitting information in accordance with the collected reception ability value (Col. 5 lines 38 – 39, modulation-coding schemes); a transmitter configured to transmit the information to each mobile station using the determined

transmission method (Figures 1, 2); and a radio resource manager configured to manage available radio resources (Col. 6 lines 16 – 20, efficiently managing the frequency spectrum, which is a radio resource), wherein the transmission method determiner determines the transmission method in accordance with the reception ability value and the available radio resources, so that a mobile station equipped with a lowest reception ability can receive the information using the determined transmission method (Cols. 5 lines 20 – 43, 6 lines 4 – 24, 7 lines 60 – 67, 8 lines 1 – 13).

Trossen does not teach wherein the reception ability value defines at least one of a demodulation method, a reception buffer size, a number of bits or codes which a processor can process per one operation, an error correction method and an interleaving length.

Petrus teaches a reception ability value that defines a demodulation method (Sections 0015 lines 6 – 9, 0032, 0033 lines 1 – 4, Table 1, 0047 lines 15 – 17, 0049 lines 6 – 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Trossen with the demodulation method of Petrus for the purpose of supporting variable data rate services thus allowing for changing propagation conditions as taught by Petrus.

Regarding Claim 4, Trossen teaches a radio station comprising: a reception ability value collector configured to collect a reception ability value of each mobile station belonging to a specific multicast group (Figure 5, Cols: 3 lines 35 – 39, 4 lines 6 – 11, 5 lines 20 – 43, 6 lines 4 – 24, 10 lines 1 – 4, Table 1); a transmission method

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determiner configured to determine a transmission method of transmitting information in accordance with the collected reception ability value (Col. 5 lines 38 – 39, modulation-coding schemes); a transmitter configured to transmit the information to each mobile station using the determined transmission method (Figures 1, 2); and a radio resource manager configured to manage available radio resources (Col. 6 lines 16 – 20, efficiently managing the frequency spectrum, which is a radio resource), wherein the transmission method determiner determines the transmission method in accordance with the reception ability value and the available radio resources, so that a mobile station equipped with a lowest reception ability can receive the information using the determined transmission method (Cols. 5 lines 20 – 43, 6 lines 4 – 24, 7 lines 60 – 67, 8 lines 1 – 13).

Trossen does not teach wherein the reception ability value defines at least one of a demodulation method, a reception buffer size, a number of bits or codes which a processor can process per one operation, an error correction method and an interleaving length.

Petrus teaches a reception ability value that defines a demodulation method (Sections 0015 lines 6 – 9, 0032, 0033 lines 1 – 4, Table 1, 0047 lines 15 – 17, 0049 lines 6 – 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Trossen with the demodulation method of Petrus for the purpose of supporting variable data rate services thus allowing for changing propagation conditions as taught by Petrus.

Regarding Claims 6, 11, Trossen in view of Petrus teaches all of the claimed limitations recited in Claims 4, 7. Trossen further teaches wherein the transmission method is determined by at least one of a modulation method, transmission power, a method of organizing the information hierarchically, the amount of data, the numbers of codes, an error correction method, the numbers of blocks, an interleaving length and a rate matching method (Col. 5 lines 38 – 39, modulation-coding schemes).

Regarding Claims 7, 13, Trossen in view of Petrus teaches all of the claimed limitations recited in Claims 4, 1. Trossen further teaches wherein the radio resource is defined by at least one of transmission power, the numbers of codes, the numbers of frequencies and propagation conditions (Col. 6 lines 16 – 20, efficiently managing the frequency spectrum which comprises the number of frequencies).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAYMOND S. DEAN whose telephone number is (571)272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Raymond S Dean/
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June 11, 2008

/Edward Urban/

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